APPENDIX 19: IMPACTS COMPARISON BY ALTERNATIVE

The following table shows a side-by-side comparison of the impacts identified in Chapter 4 for each alternative. For more explanation, see Chapter 4.

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Grazing Management				
Reduction of 11,712 AUMs in first 5 years, carrying through implementation phase until recovery	Same as Alt 1	Same as Alt 1	Reduction of 25,849 AUMs in first 5 years, until recovery	Same as Alt 1
Changes to grazing systems, some exclusions, range improvements (see Table 4.3.1)	Same as Alt 1	Same as Alt 1	Same as Alt 1, except increased number and magnitude of changes (see Table 4.3.1(b))	Same as Alt 1
Cost to BLM to implement projects = $1.6 million	Same as Alt 1	Same as Alt 1	Cost to BLM to implement projects = $2.6 million	Same as Alt 1
Current BLM Personnel	Same as Alt 1	Same as Alt 1	Need 18 FTE and $180,000 operating expenses above current funding levels for 5 years	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Upland Soils				
Improved watershed health over the long term with: Reduced surface crusting; reduced erosion; increased biological activity; increased permeability; increased root mass; increased fertility; increased soil cover; increased soil moisture	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Weed infestations of Medusahead, etc. will continue	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Upland Vegetation -- Annual Grasslands				
Perennial grasses increase	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Episodic recruitment of oaks and shrubs	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Upland Vegetation -- Sagebrush Steppe				
Increased perennial grasses [1]	Same as Alt 1 [2]	Slower than Alt 1 [3]	Faster than Alt 1 [4]	Increased perennial grasses
Increase in variety of seral stages	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increase in soil cover	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Better distribution of litter and incorporation of litter into soil	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Better root distribution in the soil profile	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased species diversity	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased photosynthetic period	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased vegetative structure	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased frequency of wild fire	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Decreased rate of spread of juniper	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased diversity of age classes in aspen	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
If it is a DPC goal, then shrubs maintained with increased vigor	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
If it is a DPC goal, then shrubs decreased and more perennial grasses and forbs	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Riparian Overview				
Lentic wetlands increase from 27% to 83% in Proper Functioning Condition	Same as Alt 1	Same as Alt 1	Same as Alt 1, but faster	Same as Alt 1
Lotic riparian increase from 28% to 62% in Proper Functioning Condition	Same as Alt 1	Same as Alt 1	Same as Alt 1, but faster	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Riparian -- Vegetation				
Increased shrub and tree layers, with improved age class distribution [5]	Same as Alt 1 [2]	Slower than Alt 1 [3]	Faster than Alt 1 [4]	Increased shrub and tree layers, with improved age class distrib.
Increased cover and vigor of herbaceous perennials	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased streambank cover	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Movement toward later seral stages	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased diversity of plants and animals	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased width of riparian zone	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Decrease of non-riparian species in the riparian zone as water tables rise	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Riparian -- Hydrologic Function and Water Quality				
Improved hydrologic function and water quality [6]	Same as Alt 1 [2]	Slower than Alt 1 [3]	Faster than Alt 1 [4]	Improved hydrologic function and water quality
Stream channels narrow and deepen	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased ground water recharge	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Increased flows in perennial streams, and longer seasonal flows in ephemeral streams	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Improved water temperatures	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Improved levels of oxygen	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Reduced nutrients, sediment and pathogens in water	Same as Alt 1	Slower than Alt 1	Faster than Alt 1	Same as Alt 1
Wildlife Habitat				
Wildlife habitats will generally be improved or maintained	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Habitats will develop more diversity	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Increased ground cover in annual grasslands will be good for some species, bad for others	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Improved habitat in oak and shrub areas, tempered by fire occurrence	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Increased fires in annual grasslands may negatively affect shrubs and small tree recruitment	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Sagebrush steppe habitats will change with increased species diversity and vegetative structure	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Increased fire occurrence with increased perennial grasses will result in decrease in pinyon-juniper community. Negative impacts for some birds, but not enough to affect their populations	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Increased fire will result in mosaic of habitat types spread across watershed. More edge will benefit most species	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Improved riparian habitats for waterfowl, shorebirds, migratory birds	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Improved aquatic habitats as more riparian areas reach Proper Functioning Condition	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Upland game habitats slowly improve (riparian component improves faster)	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Slowly improved deer habitat in perennial and annual ranges	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Improved elk habitat	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Improved pronghorn habitat due to increased diversity of plant communities	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Special Status Species				
Positive responses by special status plant species to changes in grazing management	Same as Alt 1	Same as Alt 1	Same as Alt 1, but slightly faster response	Same as Alt 1
Improved habitat for special status animal species	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Wild Horses and Burros				
Potential reductions in herd size as managers determine that wild horse and burro populations are causing an inability to meet rangeland health standards	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Recreation				
General positive effects due to increased ecological function	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Potential restrictions on some recreation activities as managers determine that some recreation activities are causing an inability to meet rangeland health standards	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Wilderness				
Improved naturalness due to improved ecological function (faster occurrence in riparian areas)	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Negative impacts due to increased human manipulation such as new fences, new water developments, more motor vehicle use, etc.	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Cultural Resources				
Little effect upon cultural properties	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Potential for increased availability of traditionally used plant species for subsistence, medicinal, and craft purposes	Same as Alt 1	Same as Alt 1	Faster than Alt 1	Same as Alt 1
Some negative impacts to ranchers' ability to maintain traditional lifestyles	Same as Alt 1	Same as Alt 1	Greater potential for negative impacts	Slightly greater potential for negative impacts than Alt 1
Economics				
Cost to permittees in first 5 years = $.6 million, and loss of 6 jobs	Same as Alt 1	Same as Alt 1	Cost to permittees in first 5 years = $1.3 million, and loss of 12 jobs	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
Long term costs from AUM reductions, with incremental implementation and gradual improvement of range condition	Same as Alt 1	Same as Alt 1	Faster improvement of range condition, potentially lower long term costs, quicker AUM reinstatement potential	Same as Alt 1
Loss of $15,811 in grazing fee revenue each of the first 5 years, with some long term costs	Same as Alt 1	Same as Alt 1	Loss of $34,911 in grazing fee revenue each of the first 5 years, with some long term costs	Same as Alt 1
Loss of $2,277 to the counties each of the first 5 years	Same as Alt 1	Same as Alt 1	Loss of $5,027 to counties each of the first 5 years	Same as Alt 1
Lower possessory interest taxes paid by permittees in CA each year (-$2,339)	Same as Alt 1	Same as Alt 1	Lower possessory interest taxes paid by permittees in CA each year (-$5,537)	Same as Alt 1
Loss of real estate value due to AUM reductions = $ 30/AUM	Same as Alt 1	Same as Alt 1	Same as Alt 1	Same as Alt 1
Increased expense of herding to allotments that require herding (26) = $3077/allot./yr	Same as Alt 1	Same as Alt 1	Increased expense of herding to allotments that require herding (33) = $4344/allot./yr	Same as Alt 1

COMPARISON OF IMPACTS				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
BLM budget = current funding levels	Same as Alt 1	Same as Alt 1	BLM budget = $1.5 million/yr above current funding levels for 5 years	Same as Alt 1

1. The following changes will occur for all alternatives. It may be a slow process in the uplands, depending upon rainfall, soils, topography, etc. For Alt 1, the changes will occur faster in the Bishop and Redding Resource Areas, and slower in the Susanville area due to the nature of the RAC proposed guidelines for those areas.

2. For Alt 2, rates of change will be the same as Alt 1 due to using essentially the same guidelines.

3. For Alt 3, rates of change will be slower due to a lack of utilization guidelines.

4. For Alt 4, rates of change will be the fastest due to the rapid implementation.

5. The following changes will occur for all alternatives. It will be a faster process than the uplands, due to more water and better soils. For Alt 1, the changes will occur faster in the Bishop and Redding Resource Areas, and slower in the Susanville area due to the nature of the guidelines for those areas.

6. With improvements in vegetation in riparian areas, all functions will improve. Especially, proper functioning riparian zones act like a sponge, holding the water longer, and releasing it slowly throughout the year. The following changes will occur for all alternatives. For Alt 1, the changes will occur faster in the Bishop and Redding Resource Areas, and slower in the Susanville area due to the nature of the guidelines for those areas.